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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/760,394	01/21/2004	Tomonori Nishino	HITA.0497	1303
7590	03/08/2006		EXAMINER DUONG, THOI V	
Stanley P. Fisher Reed Smith LLP Suite 1400 3110 Fairview Park Drive Falls Church, VA 22042-4503			ART UNIT 2871	PAPER NUMBER
DATE MAILED: 03/08/2006				

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/760,394	Applicant(s) NISHINO ET AL.	
	Examiner Thoi V. Duong	Art Unit 2871	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 03 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 December 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 21 January 2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This office action is in response to the Amendment filed December 13, 2005.

Accordingly, claims 1 and 3 were amended. Currently, claims 1-3 are pending in this application.

Drawings

2. New corrected drawings in compliance with 37 CFR 1.121(d) are required in this application because Fig. 1 fails to show "a plurality of drain lines DL which extend in the Y direction and are arranged substantially in parallel in the X direction in the pixel region AR" as described in the specification amended on December 13, 2005. Applicant is advised to employ the services of a competent patent draftsman outside the Office, as the U.S. Patent and Trademark Office no longer prepares new drawings. The corrected drawings are required in reply to the Office action to avoid abandonment of the application. The requirement for corrected drawings will not be held in abeyance.

Response to Arguments

3. Applicant's arguments with respect to claims 1-3 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

5. Claim 1 is rejected under 35 U.S.C. 102(e) as being anticipated by Kim et al. (Kim, USPN 6,707,511 B2).

As shown in Figs. 4A and 4B, Kim discloses a liquid crystal display device comprising a first substrate 401 and a second substrate which are arranged to face each other with a liquid crystal layer therebetween (col. 2, lines 5-11), wherein the first substrate 401 includes a plurality of gate lines 402 which extend in parallel in a first direction (horizontal direction), a plurality of drain lines 405 which extend in parallel in a second direction (vertical direction) which crosses the first direction, and holding capacitance lines 405b (horizontal portion, see also Fig. 5) which extend in a first direction, wherein

a pixel 407 and a switching element are provided to a region which is surrounded by two neighboring gate lines 402 out of the plurality of gate lines and two neighboring drain lines 405 out of the plurality drain lines (Fig. 4A),

the pixel 407 includes light transmitting region II which allows light incident from a back surface of the first substrate 401 to pass therethrough and a light reflecting region I

Art Unit: 2871

which allows light incident from the second substrate side to be reflected thereon (col. 1, lines 38-47),

the light transmitting region II includes a first pixel electrode 407b having the light transmitting property and the light reflecting region I includes a second pixel electrode 407a having the light reflecting property (col. 7, lines 4-7),

an insulation film 403 (Fig. 4B) and a holding capacitance electrode 405c (vertical portion, part of the holding capacitance line) which extends in the second direction and is connected to the holding capacitance line are provided below the second pixel electrode 407a (Fig. 4B), and

the holding capacitance electrode 405c is formed in an overlapped manner to a boundary portion between the light transmitting region II and the light reflecting region I (Fig. 4A, see also Fig. 5, col. 7, lines 19-32 and 46-49) and is formed of a material having a light shielding property (col. 7, lines 12-18).

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. **Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kim et al. (Kim, USPN 6,707,511 B2) in view of Sasano et al. (Sasano, USPN 5,671,027).**

The liquid crystal display device of Kim includes all that is recited in claim 2 except for a holding capacitance formed by way of an anodized film formed over the holding capacitance electrode.

As shown in Fig. 2B, Sasano discloses a liquid crystal display device comprising a holding capacitance Cadd formed by way of an anodized film AOF formed over a holding capacitance electrode PL1 (col. 11, lines 46-55).

Thus, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the liquid crystal display device of Kim with the teaching of Sasano by forming a holding capacitance by way of an anodized film formed over the holding capacitance electrode in order to improve an open ratio of the display (col. 6, lines 53-55).

8. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kubo et al. (Kubo, USPN 6,330,047 B1) in view of Nagano et al. (Nagano, USPN 6,912,034 B2).

As shown in Figs. 53 and 54, Kubo discloses a liquid crystal display device comprising a first substrate 301 and a second substrate (not shown) which are arranged to face each other with a liquid crystal layer therebetween (col. 45, lines 50-52), a plurality of gate lines 328 which are arranged in parallel on the first substrate 301, and a plurality of drain lines 329 which are arranged to cross respective gate lines of the plurality of gate lines 328 and are arranged in parallel, wherein

regions 325 which are surrounded by the gate lines 328 and the drain lines 329 constitute pixel regions, and each pixel region includes a switching element 318 which

is operated in response to a scanning signal applied from the gate line and a pixel electrode (302, 304, 305) to which a video signal is supplied from the drain line through the switching element,

the pixel electrode constituted of first pixel electrode 302 formed of a light transmitting conductive layer which is disposed in one light transmitting region 326 defined in the pixel region and a second pixel electrode 304, 305 formed of a non-light transmitting conductive film which is disposed in another light reflecting region 327 defined in the pixel region (col. 45, lines 30-50),

an insulation film 303 is formed above the first pixel electrode 302 and an opening which allows the first pixel electrode to be exposed is formed in a region of the insulation film corresponding to the light transmitting region 326 (see also Fig. 55D),

the second pixel electrode 304, 305 is formed over the light reflecting region 327 of the insulation film 303, and

a holding capacitance electrode which is formed on the same layer as the gate line 328.

However, Figs. 53 and 54 of Kubo does not show the holding capacitance electrode arranged at a portion corresponding to a side wall surface of the opening 326 of the insulation film 303, wherein the holding capacitance electrode extends in parallel with the drain line, and the holding capacitance electrode is formed of a material having a light shielding property.

As shown in Fig. 6, Nagano discloses a liquid crystal display device comprising a holding capacitance electrode 9 having a light shielding film 25 extending in parallel with

Art Unit: 2871

the drain line 4 (col. 10, lines 7-18). Fig. 5 of Nagano also shows that a light shielding film 8, which is the same as the light shielding film 25, is arranged at a portion corresponding to a side wall surface of an opening of the insulation film 24.

Thus, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the liquid crystal display device of Kubo with the teaching of Nagano by arranging the holding capacitance electrode at a portion corresponding to a side wall surface of the opening of the insulation film, wherein the holding capacitance electrode extends in parallel with the drain line, and the holding capacitance electrode is formed of a material having a light shielding property in order to prevent light leakage and alignment disorder of the liquid crystal on the contact hole (col. 5, lines 18-23 and col. 10, lines 13-18).

Conclusion

9. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

Art Unit: 2871


the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thoi V. Duong whose telephone number is (571) 272-2292. The examiner can normally be reached on Monday-Friday from 8:30 am to 4:30 pm.

Thoi Duong



03/05/2006


ANDREW SCHECHTER
PRIMARY EXAMINER